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Annotated Guide To Training Aids In Wood Products Protection

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Terry L. Amburgey, Lonnie H. Williams, and Raymond H. Beal

This paper is an attempt to assemble under one cover a listing of training aids on the large variety of topics related to wood products protection. Foreign references in the English language are given to supplement domestic sources in some areas. Various types of audio and visual materials, literature, and educational courses are grouped by categories. Annotations have been supplied where they seem desirable. Some of the annotations have been borrowed from abstracts prepared by authors or from information prepared by the sources listed at the end of the paper. Sources for the aids are given in brackets, together with the cost where known. Complete addresses of supplying organizations are listed alphabetically at the end of the paper. Books may be obtained by writing the publishers. A few references are out of print. They are listed because of their continuing importance, and can probably be obtained from large libraries.

Although no claim is made for completeness, more than 105 individual references, 15 bibliographies, 16 tape programs, 21 films, 1,050 slides, 8 State or association training programs, and other sources of information are listed. The authors would appreciate being informed of omissions or of additional items that become available. In this manner, future editions will be assured of completeness and accuracy. It should be understood that inclusion or omission of any material does not indicate an endorsement or condemnation of its contents by either the authors or the Forest Service, U. S. Department of Agriculture.

In many of the training aids, recommendations for preventing and controlling the biological deterioration of wood refer to the use of chemicals. Some of the chemicals may no longer be registered or recommended for the uses stated. Before any chemical is applied, its status should be checked with the Cooperative State Extension Service (usually at land-grant universities), the county agent, or the National Pest Control Association. Specific information on preservative treatment is available from the American Wood-Preservers' Association and the American Wood Preservers' Institute.

GENERAL INFORMATION ON WOOD

Slide Courses

WOOD STRUCTURE. Slide-tape, 35 minutes, 114 slides.

Explains in detail the anatomy of wood, how preservatives are retained, and why wood shrinks and swells.

[Oregon State University]

HOW WOOD DRIES. Slide-tape, 30 minutes, 76 slides.

Relationship of fiber walls to the swelling and shrinking of wood, the movement of water through wood, and how moisture changes affect wood.

[Oregon State University]

PENETRATION OF LIQUIDS INTO WOOD. Slide-tape, 20 minutes, 80 slides.

Theoretical aspects of fluid flow as related to the treating process, movement of preservatives through wood, and practical aspects of preservation.

[Oregon State University]

PRESSURE WOOD-PRESERVING PROCESSES. Slide-tape, 24 minutes, 119 slides.

Use of pressure-treated wood, how wood is prepared for treating, and how the treating process works.

[Oregon State University]

WOOD PRESERVATION MINI-COURSE. Slide-tape, 50 minutes, 144 slides.

Condensation of the four sound-slide units listed above. It consists ***of a brief explanation of the principal concepts of the structure, drying, and pressure treating of wood.***

[Oregon State University]

FORESTS GROW HOMES. Slide-tape, 60 slides.
[Western Wood Products Association]

Films

IN PURSUIT OF HAPPINESS. 25 minutes.
[American Plywood Association]

FOREST SERVICE FILMS. USDA Forest Service FS-31 (1973).

About 120 ***films dealing with diverse aspects of forest trees and wood use may be borrowed or purchased.***

[U. S. Department of Agriculture]

literature

American Forest Institute.
No date CHECKLIST FOR COMMUNICATORS.

Catalogues the many publications, slide presentations, and film strips produced by member associations of the Forest Industry Council.

[American Forest Institute, free]

American Wood Council
No date A READER'S GUIDE TO WOOD PRODUCTS.

Lists 63 ***booklets which give advice on how wood can be used in and around a home.***

[American Wood Council, free]

American Wood Council.
No date HOUSE-HUNTER'S GUIDE.

Helps prospective ***home buyers to compare design features and mortgage factors of houses.***

[American Wood Council, $0.25]

Anderson, L. 0.
1969. LOW-COST WOOD HOMES FOR RURAL AMERICA — CONSTRUCTION MANUAL. USDA Agriculture Handbook 364,112 p.

Detailed discussion of methods of constructing wood-frame homes. Many ***illustrations.***

[Superintendent of Documents, $1.45]

Anderson, L. 0.
1970. WOOD-FRAME HOUSE CONSTRUCTION. USDA Agriculture Handbook 73,223 p.

Detailed discussion of all aspects of constructing wood-frame structures. Well illustrated.

[Superintendent of Documents, $2.60]

Anderson, L. 0.
1972. CONDENSATION PROBLEMS: THEIR PREVENTION AND SOLUTION. USDA Forest Service, Research Paper FPL-132, 36 p.

How to control condensation and minimize moisture problems with vapor barriers and ventilation.

[Forest Products Laboratory, free]

Housing and Urban Development.
1972. WISE HOME BUYING. U. S. Department of Housing and Urban Development, 36 p.

Topics include advantages and disadvantages of new and used homes; defects in design,, construction, or maintenance; ***termites and wood rot. Describes responsibilities of HUD-FHA in regard to structural defects and gives addresses of HUD area offices.***

[U. S. Department of Housing and Urban Development, free]

Kass, B. L.
1973. HOME BUYER'S CHECKLIST. National Homebuyers and Homeowners Association, 30 p.

Many details, primarily financial, of home buying or selling. Termite inspections and design defects are ***mentioned.***

[National Homebuyers and Homeowners Association, 1225 19th Street N. W., Washington, D. C. 20036, $1.00]

National Forest Products Association.
No date LUMBER AND WOOD PRODUCTS LITERATURE.

Bibliography of literature and audio-

visual materials available from the member companies of the National Forest Products Association and from other cooperating organizations.
[National Forest Products Association; 6 or less are $0.30 each, more than 6 are $0.20 each)

National Forest Products Association.
No date THE HOUSING ISSUE.
Relates the growth of trees ***to housing.***
[National Forest Products Association, $0.08]

Ponderosa Pine Woodwork.
No date HOW TO SPOT A BETTER HOME.
Includes 16 important factors to consider when looking for a new home or apartment to help get the most for your investment now and avoid pitfalls later.
[Ponderosa Pine Woodwork, free]

Southern Forest Products Association.
No date HOME BUYER'S GUIDE TO VALUE HOMES.
Some of the latest and best ideas on home design ***and construction.***
[Southern Forest Products Association, free]

USDA Forest Products Laboratory.
1973. LIST OF PUBLICATIONS OF INTEREST TO ARCHITECTS, BUILDERS, ENGINEERS, AND RETAIL LUMBERMEN. Forest Products Laboratory Report, 15 p.
Partial listing of literature on use of wood particularly in houses and other light-frame construction.
[Forest Products Laboratory, free]

Tapes

TREES AND ENVIRONMENT CASSETTE SERIES
Seven cassettes, each with a *15-minute* ***program on each side. Side 2 of cassette No. 3 discusses Trees and Housing and side 1 of cassette No.*** 6 ***covers Wood and the Home*** En***vironment.***
[American Forest Institute, $2.00 each with script]

WOOD-DESTROYING FUNGI

Slide Courses

STAINING OF WOOD AND ITS PREVENTION. Slide-tape, 22 minutes, '78 slides.
How attack by fungi can be prevented or controlled.
[Oregon State University]

RECOGNITION, PREVENTION, AND CONTROL OF WOOD DECAY IN BUILDINGS. Slide-script, 15'7 slides.
Designed as an outline of a self-teaching seminar for house builders or inspectors.
[North Carolina State University]

PREVENTION OF DECAY OF WOOD IN HOMES. Slide-script, 30-40 minutes, 54 slides.
Shortened version of slide course listed above.
[North Carolina State University]

Filnn

WOOD DECAY BY FUNGI.
Authoritative discussion of the requirements and activities of wood-destroying fungi. Preventive and control measures are also presented.
[State University of New York]

LONGER LIFE FOR WOOD. USDA Production Number 1156-T-70.1954.17 minutes.
Discusses the economics of using treated wood in places where decay may occur and describes the value of good construction. Illustrates treating techniques.
[U. S. Department of Agriculture]

literature

Amburgey, T. L.
1971. ANNOTATED BIBLIOGRAPHY ON PREVENTION AND CONTROL OF DECAY IN WOODEN STRUCTURES (INCLUDING BOATS). Southern Forest Experiment Station, 123 p.
Lists nearly 500 literature.
[Southern Forest Experiment Station, free]

Amburgey, T. L.
1971. HAZARDS OF EARTHFILL CONSTRUCTION. Pest Control 39 (8) : 34-36.

Discusses the decay hazard of constructing earthfilled porches, flower planters, and patios adjacent to house foundations.
[Southern Forest Experiment Station, free]

Amburgey, T. L.
19'72. PREVENTING WOOD DECAY. Pest Control 40 (1) : 19-20, 22, 39.
Describes the types of wood-inhabiting fungi and gives rules for decay prevention: (1) use properly seasoned wood (2) keep wood dry while in use (3) avoid soil contact with nonpressure treated wood (4) use pressure-treated wood whenever contact with the soil or other sources of moisture cannot be avoided.
[Southern Forest Experiment Station, free]

Amburgey, T. L.
1974. PREVENTION AND CONTROL OF WOOD-INHABITING FUNGI. Pest Control 42 (6) : 22-25.
Describes factors influencing *growth of fungi and suggests how pest-control operators can prevent or remedy wood-decay problems.*
[Southern Forest Experiment Station, free]

Amburgey, T. L., and D. W. French.
1970. PLASTIC SOIL COVERS REDUCE MOISTURE IN HOMES WITHOUT BASEMENTS. Pest Control 38 (11) : 26-29.
Also published in Forest Products Journal 21(8) : 43-44 (1971).
Putting plastic covers. over the soil in crawl *spaces* reduces *the moisture content of sub-floor wooden members.*
[Southern Forest Experiment Station, free]

Boyce, J. S.
1961. FOREST PATHOLOGY. Ed. 3. McGraw-Hill Book Co., New York. 572 p.
Discusses wood-inhabiting fungi and has two chapters on the deterioration of wood products. Most of the text is concerned with forest *trees.*

Cartwright, K. St. G., and W. P. K. Findlay.
1958. DECAY OF TIMBER AND ITS PREVENTION. H. M. Stationery Office, London. 332 p.
Authoritative reference on wood decay and the organisms which cause it. Wood preservatives and methods for their *application are covered.*
[British Information Services]

De Groot, R. C.
1972. A PRACTICAL LOOK AT WOOD DECAY. Economic Botany 26: 85-89.
General discussion about types of decay, sources of moisture in buildings, and preservative treatments.
[Southern Forest Experiment Station, free]

Findlay, W. P. K.
1962. THE PRESERVATION OF TIMBER. A & C Black, Ltd., London. 162 p.
Methods of preservation, *preservatives and their evaluation, and the preservation of wood before and after manufacture. Wood-rotting fungi are briefly considered (p.* 15-20).

Hartley, C.
1958. EVALUATION OF WOOD DECAY IN EXPERIMENTAL WORK. USDA Forest Products Laboratory Report 2119, 57 p.

Hickin, N. E.
1972. THE DRY ROT PROBLEM. Ed. 2. Hutchinson & Co., London. 115 p.
Designed for the nonbiologist. Discusses what fungi are, how they affect wood, how to identify decay fungi, the difference between ordinary *decay fungi and* water-conducting decay *fungi, and methods used to preserve wood. Hazardous construction practices are illustrated.*
[St. Martin's Press, $8.951

Hunt, G. M., and G. A. Garratt.
1967. WOOD PRESERVATION. Ed. 3. McGraw-Hill Book Co., New York. 433 p.
Discusses wood-deteriorating agents and presents an authoritative and detailed discussion of the many aspects of wood preservation.

Levi, M. P.
1971. IT'S WOOD ROT, NOT TERMITES. N. C. Agricultural Extension Service, Extension Folder 300, 5 p.
Brief account of the organisms causing wood decay, factors that promote their growth, and how attacks on buildings *may be prevented.*
[North Carolina State University, $0.02 each in lots of 20 or more]

Levi, M. P.
1972. PORIA INCRASSATA OR DRY ROT IN WOOD. N. C. Agricultural Extension Service, Extension Folder 301, 5 p.
Brief discussion of how to recognize, control, and prevent decay by this water-conducting fungus.
[North Carolina State University, $0.02 each in lots of 20 or more]

Nicholas, D. D., Ed.
1972. WOOD DETERIORATION AND ITS PREVENTION BY PRESERVATIVE TREATMENTS. VOL. I. DEGRADATION AND PROTECTION OF WOOD. VOL. II, PRESERVATIVES AND PRESERVATIVE SYSTEMS. Syracuse University Press, Syracuse, N. Y.

Scheffer, T. C., and R. M. Lindgren.
1940. STAINS OF SAPWOOD PRODUCTS AND THEIR CONTROL. USDA Technical Bulletin 714,124 p.
Authoritative discussion ***of fungal stains and how they may be prevented and controlled.***

Scheffer, T. C., and A. F. Verrall.
1973. PRINCIPLES FOR PROTECTING WOOD BUILDINGS FROM DECAY. USDA Forest Service, Research Paper FPL-190, 56 p.
Discusses problems caused by decay in buildings in ***the U.*** S. and ***the*** means ***to avoid*** or ***control them. Moisture situations and*** construction ***features most responsible*** for ***the occurrence of decay in various building parts are described, and directions*** are given ***for*** eliminating ***undesirable conditions.***
[Superintendent of Documents, $1.051

USDA Forest Products Laboratory.
1971. LIST OF PUBLICATIONS ON WOOD PRESERVATION. USDA Forest Products Laboratory Report, 13 p.
Includes publications that give general information and the results of research by the Forest Products Laboratory on preservative ***materials, methods of application, and service life of treated and untreated wood.***
[Forest Products Laboratory, free]

USDA Forest Service.
1969. WOOD DECAY IN HOUSES: HOW TO PREVENT AND CONTROL IT. USDA Home & Garden Bulletin 73, 17 p.
Seasoned, properly used wood is a dependable building material. In properly designed houses that are ***well built and well maintained, decay causes little damage.***
{Superintendent of Documents, $0.303

Verrall, A. F.
1968. PORIA INCRASSATA ROT: PREVENTION AND CONTROL IN BUILDINGS. USDA Technical Bulletin 1385, 27 p.
Biology of this water-conducting fungus and how decay may ***be*** prevented.
[Southern Forest Experiment Station, free]

WOOD-DESTROYING INSECTS

General Information

Bletchly, J. D.
1967. INSECT AND MARINE BORER DAMAGE TO TIMBER AND WOODWORK RECOGNITION, PREVENTION, ERADICATION. H. M. Stationery Office, London. 88 p.
A well-illustrated aid to the identification of damage not only by major wood-boring pests but also by numerous insects only incidentally occurring in wood.
[British Information Services]

Chamberlin, W. J.
1966. INSECTS AFFECTING FOREST PRODUCTS AND OTHER MATERI-

ALS. Oregon State University Cooperative Association, Corvallis, Ore. 159 p.
Information on beetles and other insects which may occur in wood and wood products from Western States.

Ebeling, W.
1974. URBAN ENTOMOLOGY. University of California, Office of Agricultural Publications (in press) .
An authoritative, broadly based reference for every pest control firm and many entomologists. Urban entomology is just being recognized as equal in importance to well-established areas such as forest, agricultural, and medical entomology. Chapters related to wood-products protection include entomological organization and legislation, pesticides and their uses, equipment ***for pesticide application, and wood-destroying insects and fungi.***
[University of California]

National Pest Control Association.
1973. 23-YEAR INDEX OF TECHNICAL RELEASES SELECTED FOR COMPILATION, 1950-1972. National Pest Control Association, 2'7 p.
Practical information on the biology and control of wood biodeterioration pests as well as all other invertebrate and vertebrate pests in and around structures. Usually a single pest or type of pest is considered in each release.

Sweetman, H. L.
1965. RECOGNITION OF STRUCTURAL PESTS AND THEIR DAMAGE. W. E. Brown Co., Dubuque, Iowa. 371 p.
Comprehensive and especially useful for miscellaneous pests occurring in wood.

Truman, L. C., and W. L. Butts.
1967. SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS. Ed. 2. Pest Control Magazine, Cleveland, Ohio. 187 p.
Originally produced as a correspondence course ***in pest control. Wood decay and wood products insects other than*** *termites* ***receive very brief treatment.***

Termites

Slides

PREVENTION OF TERMITE ATTACK IN HOUSES. Slide-script, 37 slides.
Biology of subterranean termites and prevention of attack.
[North Carolina State University]

Films

BATTLE OF THE CENTURIES. 1932.
Ant versus termite. ***The complete life cycle of the common ant, excellently organized pattern of insect existence and struggle.***
[Purdue University] [1]

BLOCK THAT TERMITE. 1940. 20 minutes.
Habits and habitat of underground termites; methods to protect new buildings from infestation; procedures to prevent further damage after buildings are attacked. Methods of protecting infected buildings and points to be observed in constructing new buildings to prevent termite damage.
[Purdue University]

BUILT-IN TERMITE CONTROL. 1962. 13-1/2 minutes.
Designed to help pest control ***operators sell soil pretreatment to building contractors and architects.***
[Purdue University]

EARTHEN CURTAIN. 1954-1955.
Termite control.
[Purdue University]

FLAGELLATES OF TERMITES. Part 1, American, 48 minutes; Part 2, Australian, 50 minutes; Part 3, 55 minutes.
Shows approximately 100 species, their locomotion and other unusual features which cause biological problems.
[Purdue University, Part 1—$62.00, Part 2—$45.00, Part 3—$49.00]

TERMITE CONTROL. 1949. 22 minutes.
Life history of the termite, damage, and control.
[Purdue University]

[1] Although many Purdue films are available from one or more sources, Purdue University is given as the source because its film catalogue is a valuable reference in itself.

TERMITES. 23 minutes.
The life cycle, colonization, wood- and earth-dwelling types, preventing damage.
[Purdue University]

TERMITES AND THEIR CONTROL. 1956.14 minutes.
Illustrates construction errors *that allow termite* entrance. *Discusses kinds of termites, shows how they can be distinguished from ants,* and *suggests control methods.*
[Purdue University]

TERMITES OF THE GOLD COAST. 25 minutes.
Remarkable scenes of egg laying and nests of *African species of termites. The species shown are much different from termites found in the U.S.*
[Purdue University]

THE INTRUDER. 28 minutes.
About a high school boy who becomes interested in termites when they are discovered in his home. He decides to make termites his project for his school's science fair. Illustrates methods of prevention and treatment of infested homes. Rare scenes of termites, their nests, methods of attack and damage to homes.
[Purdue University]

Literature

Beal, R. H.
1967. FORMOSAN INVADER. Pest Control 35 (2) : 13-17.
A popular article on the discovery of the Formosan subterranean termite (Coptotermes formosanus *Shiraki*) *in the continental United States in 1965. Characteristics by which to recognize this termite are presented as well us a* comparison *with the* native *termite* [Reticulitermes flavipes *(Kollar)*].

Beal, R. H., and V. K. Smith.
1972. CARBAMATE OR PHOSPHATE INSECTICIDES FOR SUBTERRANEAN TERMITE CONTROL? Pest Control 40 (7) : 20, 22, 43.
Phosphate insecticides may have value us a *soil treatment.*
[Southern Forest Experiment Station, free]

Carter, F. L., C. A. Stringer, and R. H. Beal.
1970. PENETRATION AND PERSISTENCE OF SOIL INSECTICIDES USED FOR TERMITE CONTROL. Pest Control 38 (10) : 18-20, 22, 24, 62.
A popular article on the penetration and persistence of dieldrin and heptachlor in seven soil types throughout the United States.
[Southern Forest Experiment Station, free]

Ebeling, W.
1968. TERMITES — IDENTIFICATION, BIOLOGY, AND CONTROL OF TERMITES ATTACKING BUILDING. California Agricultural Experiment. Station Manual 38, 4 p.
Comprehensive and easily understood. *Abundantly illustrated to simplify identification of many U.S. species. About half of the booklet is devoted to* control.
[University of California, $1.001

Ebeling, W., and R. J. Pence.
1965. TERMITE CONTROL — PREVENTION AND CONTROL OF THE WESTERN SUBTERRANEAN TERMITE. California Agricultural Experiment Station Circular 469, 16 p.
A compilation of practical information. Other wood-destroying insects are *briefly discussed.*
[University of California]

Harris, V. W.
1961. TERMITES: THEIR RECOGNITION AND CONTROL. John Wiley & Sons, Inc., New York. 187 p.
The first account in English of termite damage as a world problem. Comprehensive information not only on damage to buildings but also on part *of termites* in reducing *yield of agricultural crops. Well illustrated.*

Hickin, N. E.
1971. TERMITES: A WORLD PROBLEM. Hutchinson & Co., London. 232 p.
Primarily written for *the layman. Discusses what termites are and how they affect wood. Brief classification of ter-*

mites as well as methods for collecting and preserving specimens. Helpful for beginning termitologists.
[St. Martin's Press, $10.00]

House, P. E.
1970. TERMITES: A STUDY IN SOCIAL BEHAVIOUR. Hutchinson & Co., London. 150 p.
Mainly for the student of entomology.

Johnston, H. R., V. K. Smith, and R. H. Beal.
1971. CHEMICALS FOR SUBTERRANEAN TERMITE CONTROL: RESULTS OF LONG-TERM TESTS. Journal of Economic Entomology 64: 745-748.
[Southern Forest Experiment Station, free]

Johnston. H. R.. V. K. Smith, and R. H. Beal.
1972. SUBTERRANEAN TERMITES. THEIR PREVENTION AND CONTROL IN BUILDINGS. USDA Home and Garden Bulletin 64, 30 p.
Detailed, illustrated advice on chemical soil treatments and desirable building practices. A good booklet for homeowners.
[Southern Forest Experiment Station, free]

Kof oid, C. A.
1934. TERMITES AND TERMITE CONTROL. University of California Press. 785 p.
One of the first and most comprehensive books on the biology of termites. Describes the termites of the United States, Mexico, Canal Zone, the West Indies, Hawaii, and the Philippine Islands. Suggests ways of preventing damage by methods of construction and th.e use of chemically treated and unpalatable woods.

Krishna, K., and F. M. Weesner.
1969-70. BIOLOGY OF TERMITES. 2 vols. Academic Press, New York.
Invaluable for biologists, physiologists, entomologists, and graduate students.

Lee, K. E., and T. G. Wood.
1971. TERMITES AND SOILS. Academic Press, New York. 251 p.
The significance of termites in soil formation and the incorporation of organic matter in the soil is critically examined.

National Pest Control Association.
1973. APPROVED REFERENCE PROCEDURES FOR SUBTERRANEAN TERMITE CONTROL. 168 p.
Comprehensive report on all aspects of control in structures. This is a basic guide for the pest control industry and the public.
[National Pest Control Association. NPCA member price $25.00, nonmember price $75.001

Smith, V. K., Jr., and H. R. Johnston.
1970. EASTERN SUBTERRANEAN TERMITE. USDA Forest Pest Leaflet 68, 8 p.
Brief description, including habits, evidence of attack, prevention, and control. Written for the general public.
[Southern Forest Experiment Station, free]

Snyder, T. E.
1935. OUR ENEMY THE TERMITE. Comstock Publishing Co., Inc. Ithaca, N. Y. 196 p.
Very complete treatise written by a world authority for the nonprofessional reader.

Snyder, T. E.
1949. CATALOG OF THE TERMITES (Isoptera) OF THE WORLD. Smithsonian Miscellaneous Collection, vol. 112,490 p.
Taxonomy.

Snyder, T. E.
1954. ORDER ISOPTERA. THE TERMITES OF THE UNITED STATES AND CANADA. National Pest Control Association, N. Y. 64 p.
Taxonomic key. Indicates distribution of termites.

Snyder, T. E.
1956. ANNOTATED SUBJECT HEADING

BIBLIOGRAPHY OF TERMITES 1350 BC TO AD 1954. Smithsonian Miscellaneous Collection, vol. 130, 306 p.

Snyder, T. E.
1961. SUPPLEMENT TO THE ANNOTATED SUBJECT HEADING BIBLIOGRAPHY OF TERMITES 1955 TO 1960. Smithsonian Miscellaneous Collection, vol. 143, No. 3, 137 p.

Snyder, T. E.
1968. SECOND SUPPLEMENT TO THE ANNOTATED SUBJECT HEADING BIBLIOGRAPHY OF TERMITES 1961 TO 1965. Smithsonian Miscellaneous Collection, vol. 152, No. 3, 188 p.

Sperling, R.
1971. PROTECTING BUILDINGS AGAINST TERMITES. PANS (Pest Articles and News Summaries) Section A 13 (4) : 345-374.
Describes what designers, builders, manufacturers *of* ***building materials,*** and *owners* can ***do to*** prevent ***damage. Well presented and illustrated.***
[Centre for Overseas Pest Research, College House, Wrights Lane, London W 8 5SJ]

Weesner, F. M.
1965. THE TERMITES OF THE UNITED STATES. A HANDBOOK. National Pest Control Association, 71 p.
Most of ***the information has*** *appeared* ***elsewhere but is brought together*** ***under one cover. The four chapters on regional distribution and keys make this book very useful.***

Weesner, F. M.
No date TERMITES AND ALL ABOUT THEM. National Pest Control Association Leaflet.
Designed *for* ***handout to the general public.***

UNESCO
1962. TERMITES IN THE HUMID TROPICS. 259 p.
More than 40 scientific papers and popular ***lectures given at a symposium held in New Delhi, India. The symposium was divided into 6 sections: systematics and morphology, physiology and development, general biology, ecology, intestinal cellulose-digesting*** symbionts, and ***control and*** *termite*-proof ***construction. Many contributions are*** from ***authors*** *of* ***international reputation.***
[UNESCO-J

Beetles

General information

Hickin, N. E.
1963. THE WOODWORM PROBLEM. Hutchinson & Co., London. 123 p.
Readable treatment *of* ***the causes*** *of* ***wood biodeterioration. Emphasizes biology and control*** *of* Anobium punctaturn ***and other*** *anobiid* ***species, but most other wood-boring beetles as well as wood wasps, termites, and marine borers are discussed.***
[St. Martin's Press, $8.95]

Hickin, N. E.
1967. THE CONSERVATION OF BUILDING TIMBERS. Hutchinson & Co., London. 144 p.
Thorough discussion *of* ***the geographic incidence, economic importance, and control*** *of* ***wood-boring beetles in Great Britain.***

St. George, R. A.
1970. PROTECTING LOG CABINS, RUSTIC WORK, AND UNSEASONED WOOD FROM INJURIOUS INSECTS IN THE EASTERN UNITED STATES. USDA Farmers' Bulletin 2104, 18 p.
Discusses the biology and control *of* ***beetles frequently found damaging unseasoned and recently seasoned wood, usually that which is covered with bark. Gives kiln-drying schedule*** *for* ***control*** *of* *larvae* ***in infested wood.***
[Superintendent of Documents, $0.30 each]

Williams, L. H.
1973. RECOGNITION AND CONTROL OF WOOD-DESTROYING BEETLES. Pest Control 41(2) : 24; 26, 28.
Various beetle infestations attributed to powder-post beetles by the pest control industry are ***described making the point that identification is important for the proper selection of control measures.***
[Southern Forest Experiment Station, free]

Williams, L. H.
1973. IDENTIFYING WOOD-DESTROYING BEETLES. Pest Control 41(5) : 30, 32, 34, 36, 38, 40.
The acronym ALBOW is proposed as an aid to remembering suggested beetle names. The acronym TOW-A-TOP is suggested for remembering differences in typical biological habits of the beetles which can be used to make sufficient identifications for control ***measure selection.***
[Southern Forest Experiment Station, free)

Williams, L. H., and H. R. Johnston.
1972. CONTROLLING WOOD-DESTROYING BEETLES IN BUILDINGS AND FURNITURE. USDA Leaflet 558, 8 p.
Questions frequently asked by homeowners are ***answered with*** practical ***information. Contrasts*** in ***beetle and termite habits and current USDA recommendations for beetle control are also given.***
[Superintendent of Documents, $0.25 each]

Films

FOREST LEGACY, 1965. 16 minutes, color.
The first half describes the importance of wood and evolution of forests in England. The second half deals with wood-boring beetles.
[Purdue University]

Anobiidae literature

Acciavatti, R. E.
1972. THE ECOLOGY OF ANOBIIDAE ASSOCIATED WITH NORTHERN HARDWOOD FORESTS IN CENTRAL NEW YORK, WITH SPECIAL REFERENCE TO *PITLINUS RUFICORNIS* SAY. University Microfilms, Ann Arbor, Michigan. 131 p.
The most extensive study ***of the second most common anobiid species in structures in the Northeast.***

French, J. R. J.
1970. REVIEW OF CONTROL MEASURES AGAINST THE COMMON FURNITURE BEETLE, *ANOBIUM PUNCTATUM* (DeGEER). Journal of the Institute of Wood Science 5 (2) : 29-32.
Draws significant findings from 45 ***references about the control of this beetle, the major pest of seasoned wood in Australia, England, Europe, and New Zealand.***

Linscott, D.
1963. THE SUSCEPTIBILITY OF TIMBER TO ATTACK AND THE PROBABILITY OF AN INFESTATION BY ***ANOBIUM PUNCTATUM*** (DeGEER) . Proceedings, British Wood Preservers' Association Annual Convention. 30 p.
The information is excellently documented under 15 factors that influence beetle attack. A checklist shows 112 ***hosts.***

Moore, H. B.
1968. DEVELOPMENT AND LONGEVITY OF ***XYLETZNUS PELTATUS*** UNDER CONSTANT TEMPERATURES AND HUMIDITIES. Annals of the Entomological Society of America 61: 1158-1164.
Results are limited to those obtained with adults and with larvae up to 6 weeks after egg hatching.

Moore, H. B.
1970. INCUBATION TIME OF EGGS OF ***XYLETINUS PELTATUS*** (COLEOPTERA: ANOBIIDAE) UNDER CONSTANT TEMPERATURES AND HUMIDITIES. Annals of the Entomological Society of America 63: 617-618.

National Pest Control Association.
1972. ANOBIID POWDER POST BEETLES. Technical Release 21-72, '7 p.
Practical information about the identification, biology, and control.

Simeone, J. B.
1962. SURVEY OF WOOD-FEEDING ANOBIIDAE IN NORTHEASTERN UNITED STATES INCLUDING A STUDY OF TEMPERATURE AND HUMIDITY EFFECTS ON EGG DEVELOPMENT OF *HADROBREGNUS CARINATUS* (SAY). Proceedings, XI International Congress of Entomology, p. 326-335.
Compares incidence *of* ***anobiids in structures and in*** *reference collections.* ***Influences*** *of* ***temperature and humidity on the most common species in the Northeast*** **are** ***briefly reported.***

Snyder, T. E.
1935. AN INTRODUCED ANOBIID BEETLE DESTRUCTIVE TO HOUSES IN THE SOUTHERN STATES. Proceedings of the Biological Society of Washington 48: 59-60.
Apparently the only reference to Nicobium hirtum *Illiger,* ***probably the second most common anobiid in structures in the Southeast.***

Spink, W. T., H. R. Gross, and L. D. Kirst.
1966. CAN WATER EMULSIONS OF CHLORINATED HYDROCARBON INSECTICIDES CONTROL THE WOOD-BORING BEETLE *XYLETINUS* ***PELTATUS*** (HARRIS) IN STRUCTURAL TIMBERS? Pest Control 34: 12-13, 15, 44, 46.
This report has been the basis *for* ***the widespread use*** *of* ***water-emulsion formulations*** *for* ***beetle*** control.

White, R. E.
1962. THE ANOBIIDAE OF OHIO (COLEOPTERA). Bulletin of the Ohio Biological Survey l(4) : l-58.
Taxonomy

White, R. E.
1971. KEY TO NORTH AMERICAN GENERA OF ANOBIIDAE, WITH PHYLOGENETIC AND SYNONYMIC NOTES (COLEOPTERA). Annals of the Entomological Society of America 64: 179-191.
The latest and most complete key to ano biids.

Williams, L. H.
1973. ANOBIID BEETLES SHOULD BE CONTROLLED. Pest Control 41(6) : 18, 20, 22, 38, 40, 42, 44.
Damages occuring in 4 severe infestations *of* X. peltatus, ***the most common species in structures in the Southeast, are described to emphasize that early detection and control are warranted.***
[Southern Forest Experiment Station, free]

Lyctidae Literature

Christian, M. B.
1940. BIOLOGY OF THE POWDER-POST BEETLES, ***LYCTUS PLANZCOLLZS*** LECONTE AND ***LYCTUS PARALLELOPZPEDUS*** (MELSH.) PART 1. Louisiana Conservation Revue 9 (4) : 56-69. Part II 10 (1) : 40-42.

Gerberg, E. J.
1957. A REVISION OF THE NEW WORLD SPECIES OF POWDER-POST BEETLES BELONGING TO THE FAMILY LYCTIDAE. USDA Technical Bulletin 1157, 55 p.
The newest and most complete taxonomic key *for* ***the Lyctidae.***

National Pest Control Association.
1961. LYCTID POWDER-POST BEETLES -THEIR BIOLOGY AND CONTROL. Technical Release 19-61, 20 p.
A thorough compilation *of* ***practical information. An appendix briefly discusses wood identification, growth, and terminology.***

Smith, V. K.
1968. LINDANE CONTROLS LYCTUS POWDER-POST BEETLES DURING AIR-DRYING OF ROUGH ASH LUMBER. Journal of Economic Entomology 61: 323-324.

Wright, C. G.
1959, THE INFLUENCE OF SEVERAL ENVIRONMENTAL FACTORS ON THE DEVELOPMENT OF THE SOUTHERN LYCTUS BEETLE, ***LYCTUS PLANZCOLLZS*** LECONTE. Annals of the Entomological Society. of America 52: 632-634.

Wright, C. G.
1960. BIOLOGY OF THE SOUTHERN LYCTUS BEETLE, ***LYCTUS PLANICOLLZS.*** Annals of the Entomological Society of America 53: 285-291.

Bostrichidae literature

Fisher, W. S.
1950. A REVISION OF THE NORTH AMERICAN SPECIES OF BEETLES BELONGING TO THE FAMILY BOSTRICHIDAE. USDA Miscellaneous Publication 698, 15'7 p.
Taxonomy.

Woodruff, R. E.
1967. AN ORIENTAL WOOD BORER, ***HETEROBOSTRYCHUSAEQUALZS*** (WATERHOUSE), RECENTLY ESTABLISHED IN FLORIDA (COLEOPTERA: BOSTRICHIDAE) . Entomology Circular 58, 3 p.
[Florida Department of Agriculture, Division of Plant Industry, Gainesville]

Cerambycidae (old house borer) literature

Although the old house borer has been studied extensively in Europe and Africa, the numerous references will not be listed here.

McIntyre, T., and R. A. St. George.
1972. THE OLD HOUSE BORER. USDA Leaflet 501, 8 p.
Brief ***description, including habits, evidence*** *of* ***attack, prevention, and control. Written*** *for* ***the general public.***
[Superintendent of Documents, $0.25 each]

National Pest Control Association.
1965. OLD HOUSE BORER. Technical Release ll-65,10 p.
Good compilation *of* ***biology and control, in layman's terms.***

WOOD-DESTROYING INSECTS AND FUNGI

Slides

PREVENTION OF DECAY AND TERMITE ATTACK IN HOMES. Slide-script.
Discusses wood-inhabiting fungi and termites, with emphasis on prevention and control.
[North Carolina State University]

National Pest Control Association.
A listing of about 160 slides, some *Of* *wood-products pests, may be obtained by* **writing.** ***Slides may be purchased for about*** *$0.65* ***each.***

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A set of *35* ***slides of wood products insects may be purchased.***

Pest Control Operators of California, Inc.
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Znformation about the 20 slide sets being produced by this organization may be found in National Pest Control Operators News, January 1972, p. 12-15.

Films

INSPECTION FOR WOOD DESTROYING ORGANISMS. U.S. Navy Training Film MN 8167A. 18 minutes.
Describes the problems faced by the Navy in maintaining its wooden structures. ***Explains that wood is destroyed by living organisms and shows how to inspect*** *for damage.*
[Purdue University or U.S. Navy]

CONTROL OF WOOD DESTROYING ORGANISMS. U.S. Navy Training Film MN 8167B. 22 minutes.
Outlines control methods.
[Purdue University or U. S. Navy]

WOOD PRESERVATION — EFFECTS OF MARINE ORGANISMS. U. S. Navy Training Film 8167C.
Biology *of* ***pests that attack*** **waterfront** ***structures. Primary emphasis is given to marine borers, but fungi and insects*** **are also discussed.**
[U. S. Navy]

WOOD PRESERVATION — CONTROL OF MARINE ORGANISMS. U. S. Navy Training Film MN 8167D.

Emphasizes the need for thorough periodic inspections and use of ***pressure-treated wood.*** [U. S. Navy]

TREATING WOOD. 1958.14 minutes.

Emphasizes the need for treating wood that will be exposed to Florida's damp climate. Lists and discusses wood-destroying agents, shows examples *of* ***damage, and discusses*** protective ***treatments, Includes a tour of a*** *wood-treating plant.*
[Purdue University]

THE MOST IN POSTS. 1956.20 minutes.

Humorous, but with sound advice for farmers, this *film* ***describes the attack*** *of* ***termites and wood rot on fence posts and*** *farm* ***structures.***
[Purdue University]

Listing of 16 mm films in entomology and related fields.

List includes *many* ***subjects other than*** *wood-products protection and is current as* *of* 1972.
[Purdue University, $1.00]

Listing of filmstrips in entomology and related fields.
[Purdue University, $0.503

literature

Biesterfeldt, R. C., T. L. Amburgey, and L. H. Williams.
1973. FINDING AND KEEPING A HEALTHY HOUSE. USDA Forest Service General Technical Report SO-1, 20 p.
General discussion *for* ***householders. Shows how construction and design, as well as maintenance, can prevent decay by keeping wood dry. Tells how attack by termites and other wood-destroying insects can be prevented and controlled.***
[Southern Forest Experiment Station, free]

Blake, E. G.
1953. ENEMIES OF TIMBER: DRY ROT AND THE DEATH-WATCH BEETLE. Chapman and Hall, London. 206 p.
Detailed. discussion *of* Merulius lacrymans, a ***water-conducting decay fungus, and the death-watch beetle.***

Findlay, W. P. K.
1953. DRY ROT AND OTHER TIMBER TROUBLES. Hutchinson & Co., London. 269 p.
Detailed discussion *of* ***wood deterioration, by both fungi and insects, in living trees and wood products. Methods*** *of* prevent&g ***and controlling decay in buildings, ships, and'other products.***

Findlay, W. P. K.
196'7. TIMBER PESTS AND DISEASES. Pergamon Press, London. 280 p.
Describes the principal pests and diseases *of* ***standing trees and wood in storage and use, their economic significance, and prevention.***

Hickin, N. E.
1963. THE INSECT FACTOR IN WOOD DECAY. Hutchinson & Co., London. 336 p.
Reviewed in Pest Control 33(6): 62-64 (1965). ***Discusses insects, mainly beetles, which attack and destroy structural wood in Britain.***
[St. Martin's Press, $8.951

Oliver, A. C.
1964. TIMBER PESTS AND THEIR CONTROL. Timber Research and Development Association, St. John's Road, Tylers Green, High Wycombe, Bucks, England. 64 p.
An excellently illustrated reference primarily for ***diagnosing biodeterioration*** problems ***and selecting control measures. Fungi growing in or on wood, beetle pests,*** and marine borers receive ***more attention than termites or wood preservation.***

Scott, G. A.
1963. DETERIORATION AND PRESERVATION OF TIMBER IN BUILDING. Longmans Green & Co., Ltd.,

London. 148 p.
A practical handbook, primarily for builders in Britain, covering deterioration of wooden members by atmospheric conditions, fungal decay, and insect pests; and methods of treatment.

USDA Forest Products Laboratory.
1955. WOOD HANDBOOK. USDA Agriculture Handbook 72,528 p.
Basic information on wood as a material of construction, with data for its use in design and specification, Sections are devoted to protection from fungi and insects, painting *and finishing, and preservation.*
Currently out of print but a revision may be available in late 1974.
[Superintendent of Documents]

USDA Forest Products Laboratory.
1972. LIST OF PUBLICATIONS ON FUNGUS AND INSECT DEFECTS IN FOREST PRODUCTS. Forest Products Laboratory Report, 8 p.
[Forest Products Laboratory, free]

PEST CONTROL TRADE PERIODICALS

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EDUCATION AND TRAINING OPPORTUNITIES

Formal training, Campus or correspondence.

A list of universities offering courses in pest control technology may be obtained from the National Pest Control Association.

Short courses and *workshops*

Nearly every State has one or more 1- to 5-day courses sponsored by universities, regulatory offices, or pest control associations. Date and location are given monthly in industry trade magazines.

Association-sponsored training *in pest-control technology*

The National Pest Control Association sponsors a Servicemen's Training Program. Information may be obtained from the NPCA. The California Pest Control Association sponsors courses accredited by California State Polytechnic University and administered by Kellogg-west Center for Continuing Education. The Tidewater Pest Control Association sponsors a course at Thomas Nelson Community College, Hampton, Virginia; it consists of 20 once-a-week sessions.

Training sponsored by State Regulatory Offices

Arizona's course is 20 to 24 lessons, given twice a week and rotated between Phoenix, Tucson, and Yuma. Mississippi's initial course was 20 weeks. Weekly meetings were held in various cities throughout the State. A shorter course is now planned.

Other

National Pest Control Association

Membership cost for extension, research, and regulatory personnel is $9.00 per year. This sum entitles member to receive technical releases. For those who wish to receive all information released by the association, the membership fee is $18.00.

Tape cassettes

Tapes on subterranean termites, other wood pests, and household pests are available from Dr. Austin M. Frishman, 30 Miller Road, Farmingdale, New York 11735.

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Amburgey, Terry L., Williams, Lonnie H., and Beal, Raymond H.

1974. Annotated guide to training aids in wood products protection. South. For. Exp. Stn., New Orleans, La. 16 p. (USDA For. Serv. Gen. Tech. Rep. SO-5)

Lists publications, bibliographies, tape programs, films, and slides.

Additional keywords: Pest control, wood decay fungi, stain fungi, termites, wood-destroying beetles, wood-inhabiting insects, building design, preservative treatment.